

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/059572 A1

(51) International Patent Classification⁷: **G01R 11/00**,
G08C 19/00, H02J 13/00

(21) International Application Number:
PCT/NZ2004/000324

(22) International Filing Date:
16 December 2004 (16.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
530254 16 December 2003 (16.12.2003) NZ

(71) Applicant (for all designated States except US): **PULSE
UTILITIES LIMITED** [NZ/NZ]; 127 The Strand, Par-
nell, Auckland, 1001 (NZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ABBOT, Stephen**,

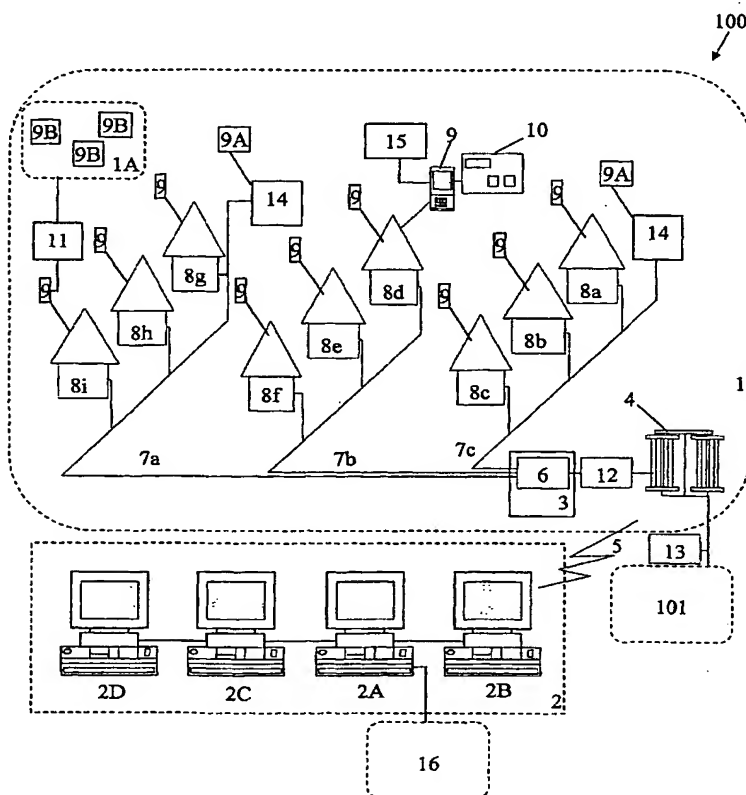
Allen [NZ/NZ]; 8 Lesley Grove, Waikanae, 6010 (NZ).
FUTTER, John, Richard [NZ/NZ]; 3 Vander-velden
Way, Horokiwi, Wellington (NZ). **MARTIN, James, Lee**,
Allworthy [NZ/NZ]; 8 Tarata Street, Mt Eden, Auckland,
1003 (NZ). **ROWE, Dr Gerard** [NZ/NZ]; 307A Tamaki
Drive, Kohimarama, Auckland, 1005 (NZ). **HUSO, Rand**,
Cary [US/US]; 14143, 280th Ln. NE, Duvall, WA 98019
(US).

(74) Agent: **BALDWIN**S; PO Box 5999, Wellesley Street,
Auckland, , 1001 (NZ).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: A POWER LINE COMMUNICATION SYSTEM AND AN INTELLIGENT METER



(57) Abstract: A power line communica-
tion system (100) including a plurality of
intelligent devices (9) in communication
with a power line and operable to monitor
energy usage at a site and communicate
usage data onto the power line, and a
controller (3) also in communication with
the power line, wherein each intelligent
device (9) maintains a routing table
identifying a first set of other intelligent
devices (9) downstream of it relative to
the controller (3) that it can communicate
with directly and identifying a second
set of other intelligent devices (9)
downstream of it relative to the controller
(3) that it can communicate with through
one or more of the first set of other
intelligent devices (9).



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.